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17. ABSTRACT (MAX. 250 WORDS) Educational environments, highly structured or unstructured, were differentially effective with students of varying personalities and abilities. The report considered the utility and relevance of the Conceptual Systems model by describing a specific project in which the model served as the basis for forming homogeneous classroom groups. The project was conducted with a population of lower class children, primarily Negro, selected from the ninth grade. The children were divided into three groups on the basis of previous tests: one group was characterized by a failure to incorporate the generalized standard; the second, by the generalized standard which defined right from wrong and one's conformity to this standard; and the third, by a "break-away" from the standard and the development of self-scored standards. The general aim of the exploratory study was to obtain some indication of the educational relevance of the model by exposing different stage-similar classroom groups to the same environment.

The 147 students were assessed on a battery of system-relevant measures. Intelligence was also used as a basis for classification. The different stage groups were observed under the same conditions, each scheduled with the same English, science, and social studies teachers. The three teachers were told to teach these classes in whatever ways seemed most appropriate to them. The teachers gave evaluations of teaching procedure and class performance at the end of the study.

Results showed that the first group was, as expected, poorly organized and uninterested in school and had a very short attention span. The second group was, as expected, concerned with propriety, with making a good impression and obtaining good grades. The third group was, as predicted, more independent, questioning, and self-directed.

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HOMOGENOUS CLASSROOM GROUPING BASED ON CONCEPTUAL SYSTEMS THEORY IN AN EDUCATIONAL ENRICHMENT PROJECT: AN EXPLORATORY STUDY.[1]

HARVARD GRADUATE SCHOOL OF EDUCATION
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Once the major goal of education has been set, then the analysis of the educational process requires one to specify the short-term goals or stages the student must reach along the way to this major goal, and to derive those educational environments most likely to produce conditions in which the students will reach these goals. In considering the value of a theoretical model for educational intervention we may use as the initial criteria the degree to which the model serves as a guide to set long-term goals, to specify short-term goals, and to derive procedures appropriate for attempting to reach these goals.

A person at a higher conceptual level is assumed to be better able to cope with the diversity and complexity of problems he is likely to encounter. On this basis:

> "We hold that the goal of education in a democratic society such as ours is to provide the conditions to produce more abstract conceptual structure. Viewed presently, the role of education in our society is <u>not</u> training children to achieve higher marks on objective, machine scored examinations. Rather, from a conceptual systems viewpoint, the aim of education is to produce persons who are questioning, inventive original, critical, creative, and if need be different" (Hunt, 1961, p.9).

If a major educational goal is to encourage the development of greater adaptive capacity and flexibility, then the present model provides a specific

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[1]Paper read at the American Educational Research Association Symposium, "Conceptual Systems Theory and Educational Research," Chicago, February 20, 1964 Work described in this report was conducted as a part of the project, "Indicators of Developmental Change in Lower-class Children," supported by the Ford Foundation. This study is being conducted in cooperation with the Madison Area Project, Syracuse, N.Y., directed by Mario Fantini.

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guide for working toward this long-term goal. It should be emphasized however, that the model is not intended to accomplish the goal of increasing student scores on achievement examinations as traditionally defined.

Given ideal conditions a child progresses through a series of successive stages toward higher levels of integrative capacity and interpersonal maturity. Articulation of the present stage or progression to the next stage therefore represent the intermediate goals in the present model. (See Chart 1). The specific educational environment which will encourage progression will depend on the present level of the child's development. For example, a highly structured, clearly organized environment might facilitate development within Stage I, but might restrict development for persons at Stage II.

The present model is a differential treatment model consisting of logically derived statements of the "if ... then ..." variety which are conditional upon the conceptual orientation of the person. Knowledge of a child's present conceptual level is essential. If we know the present level, then we can derive the specific educational environment most likely to produce progression toward a higher level.

The issue is not "which environment is best?" but rather "which environment is best for a specified target population?" That educational environments such as highly structured or unstructured are differentially effective with students of varying personalities, abilities, or whatever is, of course, generally recognized. Here we are simply attempting to coordinate or match the environment and person most effectively by use of a theoretical model. Assuming the conceptual orientation is known, the model may be applied to one individual child or to a small group of children within a mixed classroom. However, the most dramatic application of the model occurs when an entire classroom is homogeneous with regard to conceptual structure.

The presumed advantages of homogeneous classroom grouping are well known: increased effectiveness and increased efficiency. Effectiveness thrcugh homogeneous grouping is presently enhanced because the teacher can adopt the one environmental procedure most likely to induce progression for all students of the particular conceptual orientation. Efficiency is increased by maximizing the "reach" of this environment to the greatest number of students.

The present report will consider the utility and relevance of the Conceptual Systems model by describing a specific project in which the model served as the basis for forming homogeneous classroom groups. The project is being conducted with a population of lower class children, primarily Negro, in Madison Junior High School, Syracuse, New York, which is currently the focus of an educational enrichment program through the Madison Area Project. Like most populations of culturally deprived students, the mean intelligence score is lower than in middle class schools. However, we are presently concerned with variations <u>within</u> this population, so that the general characteristics of the target population are not of primary concern except as they may qualify the generality of any results obtained.

The exploratory study to be described was conducted during the school year of 1962-63 with students selected from the ninth grade. On the basis of earlier results with this gro .p we selected three stages as the basis for forming stage-similar classroom groups: Sub I Stage, Stage I, and Stage II. Since the theoretical conception of these three stages determines expected classroom characteristics of each stage group as well as the environment most appropriate for each group, let us consider the characteristics of these three groups as theoretically conceived.

<u>Characteristics of Sub I orientation</u>

In the present population, the Sub I orientation is characterized by a failure to incorporate the generalized standard along with an attempt to

"break away" and define oneself. But the Stage II work of self-delineation cannot proceed without the Stage I incorporation of a standard from which to distinguish oneself. The Sub I orientation in adolescence therefore is seen as attempting to function at Stage II without having dealt successfully with Stage I. The most central feature of this unsuccessful attempt to oppose a standard which has not been articulated is concrete negativism. The person resists suggestions or information which he interprets as subjugation by attempting to exclude them entirely. Since failure is inevitable in this cycle, he also frequently manifests general uncontrolled hostility. Because of his defective socialization the person oriented to Sub I seeks immediate gratification, and views interpersonal relations in a very egocentric, self-centered fashion. His immature self-centeredness("What's in it for me?") coupled with his sensitivity to control ("Stop buggin me?") precludes any very satisfactory interpersonal relations. He expresses feelings primarily by blasts of anger resulting from exasperation at the impossibility of being independent from something which is not understood.

Characteristics of Stage I orientation

The major focus here is on the generalized standard which defines right from wrong and one's conformity to this standard. The person oriented to Stage I experiences his world in categorical chunks (good-bad) which are based on absolute cultural prescriptions. He adapts to changes in the environment only by turning to the "rule book" since for him the "rules of the game" are the game. Such inflexible concreteness, of course, precludes effective adaptation to change. Interpersonal relations occur in a network of role prescriptions without any empathic understanding of what the other person feels or thinks. He also experiences himself primarily through a filter of role prescriptions("What should I be doing?") and evaluates his self-worth by his success in living it up to the "oughts" dictated by the rules.

He is highly sensitized to status and authority of other persons but not to their personal characteristics. Since standards and rules are so important, he is very upset when these guide lines are unclear or when he must perform without them.

Characteristics of Stage II orientation

The focus is on an independent "break away" from the standard and the development of self-anchored standards. Stage II represents "negative independence" or "freedom from" constraint, in Fromm's terms, which implies that the generalized standard has been incorporated earlier. Stage II is concerned with self-distinctiveness in contrast to the concern with self-centeredness at Sub I Stage. The higher conceptual level of Stage II is evident by the availability of alternatives.

The Stage II orientation is capable of considering the circumstances and possibilities for self-learning as modulating conditions to otherwise negative experiences. His dislike of control is based on its interference with self-delineation. His more differentiated structure permits at least some tolerance of imposition or control from others ("he may still experience a suggestion as "bugging" but he has other alternatives for viewing it). The increased discrimination in Stage II is exclusively between self and other and not between-other discrimination so that he is as yet also incapable of empathic understanding.

Description of exploratory study

The general aim of this exploratory study was to obtain some indication of the educational relevance of the model by exposing different stage-similar classroom groups to the same environment. We were not presently concerned with providing differential environments tailored to each stage group since we saw this as a problem to be dealt with later. Here we are asking the very general question of "Do the three stage groups differ from one another in classrooms?"; if so, "Do these differences make any educational

sense to the teachers?"

Method

In order to form a stage-similar classroom groups, the 147 students in the ninth grade were assessed on a battery of system-relevant measures. Responses to sentence completion measure were scored according to degree of abstractness and negativism which then served as the primary basis for stage classification. Intelligence was also used as a basis for classification. We had earlier found that Sub I students were lower in intelligence while there were no differences between Stage I and Stage II in intelligence. Therefore, the Sub I class was formed from the lower half of the intelligence scores and the other two groups formed from students in the upper half of the intelligence distribution. Within these IQ ranges the defining criteria for the three groups were as follows: For Sub I, low abstractness and high negativism; for Stage I, moderate abstractness, low negativism; for Stage II fairly high abstractness and moderate negativism. Scores on an Impression Formation Test developed by Gollin were used as secondary criteria. Use of these criteria led to forming three classroom size groups homogeneous in personality stage: a Sub I group of 20 students with a mean IQ of 87, a Stage I group of 24 students with a mean IQ of 96, and a Stage II group of 23 students with a mean IQ of 95.

In order to observe the different stage groups under the same conditions, each one of the groups was scheduled with the same English teacher, the same Science teacher, and the same Social Studies teacher. Each class met daily for 45 minutes as a regular part of the school schedule. The three teachers concerned were told initially only to teach these classes in whatever ways seemed most appropriate to them, and that after a six-week period they would be asked for their reactions and also told the basis of the grouping.

Classroom observations were made by eight graduate students, each of whom wrote qualitative impressions, ranked the three groups on each of several scales, and assigned an absolute rating for each scale. Observers were of course not aware of the nature of the groups.

Six weeks after forming the groups, each of the participating teachers rated each group and gave his impressions of each group in a tape-recorded interview. Following the interview they were informed of the nature of the groups (See Chart 2).

Characteristics of classroom groups

Sub I Group. We would expect theoretically that this group would be poorly organized, uninterested in school and have a very short attention span. In keeping with this expectation, both observers and teachers rated the Sub I group as noisy, poorly motivated, and non-competitive. Observer comments consisted of "Noisy, poorly disciplined, generally inattentive," "Antagonistic to school," and "Extremely resistant to teacher." Teacher comments describing the Sub I group were "They get confused easily... get bored quickly ... they have less self-control than the other groups." "They really don't care about what is going on . . . it's hard to keep them interested in something for any length of time beyond ten minutes" and "Majority of these people are not too interested in school, period."

Stage I Group. On a theoretical basis we would expect this group to be concerned with propriety, making a good impression, and obtaining good grades. As expected, this group obtained better school grades on the basis of their intelligence. Presumably this overachievement reflects the strong motivation to cultural conformity. Observers commented on this Stage I group as follows: "The dependence on each other's approval seemed to be quite high, since there appeared to be some effort made to ascertain a friend's opinion before speaking out." "Questions were asked to impress the teacher and other students," and "The group was quiet, attentive, and orderly." The

teacher comments: "Anxious to maintain a high grade . . . never complain about the work being heavy." "Thy may make a statment and I question them to see how they will react and a lot of them do not have faith in their convictions and as soon as you question them they just back down."

Although the impressions of observers and teachers generally agree with expectations, we also observed an unanticipated interaction between two of the teachers and two of the stage groups. Teachers and observers agreed that the Stage I group appeared to function more effectively with one teacher while the Stage II group functioned more effectively with another teacher. This differential functioning was manifested by ratings of higher spontaneity and interest. Thus, there was tentative evidence of some differential effectiveness though the basis require further study.

Stage II Group. We would expect members of this group to be more independent, questioning, and self-directed. Observer comments support this expectation, "The class interacted largely with itself and needed the teacher only as an arbiter ... Did not seem to rely on the teacher's direction as much as the other two groups." "Interested in finding out the information made available to them by the teacher." "Did not ask questions to impress teacher and other students." Teacher comments made about Stage II group were as follows: "They will stand up to their convictions more than Stage I... they back up their feelings . . . they will stick to what they believe more" and "We had a discussion and I mentioned statistical studies done on how smoking can produce cancer and they were not willing to believe this without checking it for themselves where the Stage I group were willing to believe it." Although the general impressions bore out expected classroom characteristics there was the one specific interaction between teachers and stage groups referred to in which one of the three teachers seemed to be particularly effective with this group.

Effective teaching procedures with stage groups

Perhaps some light can be shed on this question by considering the teacher's response to the question of "How did you find was the best way to work with this particular group?" Recall that the teachers were unaware of the nature of the groups or the optimal expected environment.

Sub I Group. We would expect that the environment most appropriate for the Sub I group would be a consistent, highly organized, yet accepting atmosphere in which these students could gradually begin to clarify their relation to the world by experiencing consistency. The teachers, through their own previous experience and perceptiveness, apparently arrived at similar conclusions. Their comments on what worked best with the Sub I group were "In this class I do a lot more visual things, demonstrations, showing them the actual thing by demonstration rather than by having them show me what they know about it." "If I can get them busy immediately with a writing exercise, things settle down . . . when it comes to discussion we had to drop the whole thing, it got out of hand, out of control." "More rote learning, the usual slow group procedures, drilling, going over the same thing many times to make sure that everyone had it."

Stage I Group. We would expect the optimal environment to be clearly structured and competitive, with standards of expected behavior and accomplishment emphasized. In keeping with this expectation, the teacher who seemed most effective with the Stage I group commented as follows: "This class is very competitive so I put them in seats according to the order of scores on their tests . . . when you get a lot of competition, that's good, and they are very competitive." However, if progression were the goal for this group, then the teacher would gradually introduce more independent activities which were not normatively evaluated.

Stage II Group. This group should function most effectively in an environment which permits more individual activities, e.g., self-selected projects and less imposed structure. If, however, the aim is for progression to the [illegible] understanding of Stage III, then procedures [illegible] confront the Stage

II group with the personal feelings of others might be most appropriate. The teacher who was most effective with this group commented: "Many times I let them know how I feel about something and they'll listen to it, evaluate it, and discuss it."

Teacher impression of value of grouping

Teacher reaction to the grouping was favorable, as indicated by these comments: "I liked the groups very much. They were much easier to teach, even their personalities were somewhat alike." "I think it was a great help . . . I don't know how you mixed these but you did a pretty good job . . . you know more what to expect with these classes." In our use of the procedure just described we have since realized that we were unwittingly using a method for communicating the present differential treatment model. The method consists of exposing the person, in this case the teacher, to variations derived from the model without telling him what they are. Then if the variations make sense to him in terms of his own decisions and activities (even though he may be unaware of the nature of this relevance) then he will be more interested in learning about the basis of the variation and their implications.

We concluded from this exploratory study that homogeneous grouping based on the present model showed potential relevance for educational planning. Some of the results in this study may have been attributable to intelligence variation but even with intelligence equated, variation in personality stage produced educationally relevant grouping. Although at this time we had not intended to study differential effectiveness of specific teachers upon different stage groups, its importance became quite apparent. How to conceptualize the link between the teacher's personality and the kind of educational environment he can provide is an extremely important problem.

Extension of project during current year

The generally favorable results were encouraging not only to us but also to the staff of the Madison Area Project and the school officials. Therefore, during the current year we are studying the effects of homogeneous grouping in a more systematic, extensive investigation. Work during the present year differs from the exploratory study in a number of ways:

1. Grouping was based only on the stage of personality development.
2. The basis for stage classification rests on several measures in addition to the sentence completion measure.
3. Three stage groups were formed at each grade.
4. More teachers and more courses of study were included.
5. The teachers were aware of the nature of the grouping, and the theoretical model serves as the basis for specific lesson strategy and for weekly in-service training sessions.
6. More specific means are being employed to evaluate how different groups respond to the same lesson, and some work has begun in investigating response of different stage groups to lessons presented in specifically varied environmental contexts.

We are now in the mdist of this more extensive project so that results are not available. It may be appropriate, however, to summarize very briefly a few of the problem areas we have encountered and are attempting to deal with in this current application of the model.

1. The need for a theoretically relevant taxonomy of educational environments has become increasingly apparent. Specific procedures for coding an environment or writing a specific "recipe" for how to render a particular lesson with one or another environment is an urgent need which we have just begun to study.

2. The need to make a distinction within a stage of the degree of openness has also become apparent. Obviously a student who is closed at Stage I will respond differently to an environment encouraging independence than will a student who is open at Stage I.

3. Related to this point is the need to distinguish for the teacher between the aim of providing the environment optimal for current functioning and the condition which will encourage development. The fact that Stage I students comply does not mean that the teacher should continue to encourage their submission.

4. The difficulty in evaluating effects from the teachers once they have become aware of the nature of the grouping and the model is a problem familiar to any program of intervention and calls for some independent evaluation.

In conclusion, I would like to mention one interesting implication of homogeneous grouping for the problem of racial integration in the schools. As formerly all-white school admits Negro students, one of the problems is that of avoiding discrimination based on skin color. The use of stage-similar homogeneous grouping emphasizes similarity in personality orientation. Is it possible that the use of homogenous grouping which placed together Negro and white students of similar personality level might transcend and diminish the importance of skin color by providing a specific basis for seeing the similarities in and thus truly integrating students of different skin colors?

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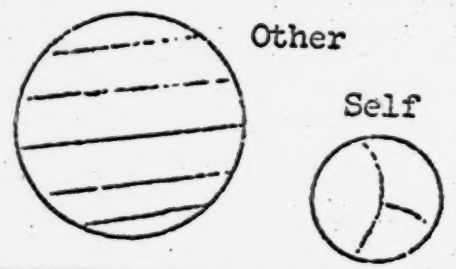
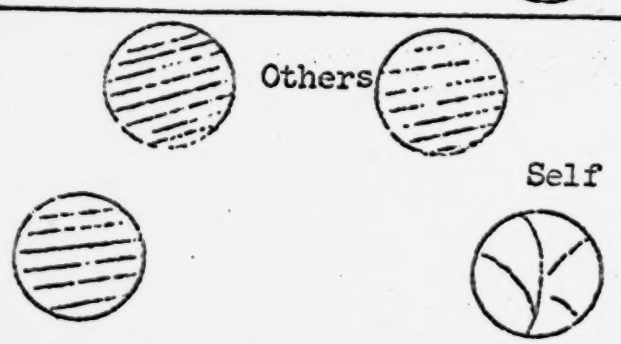
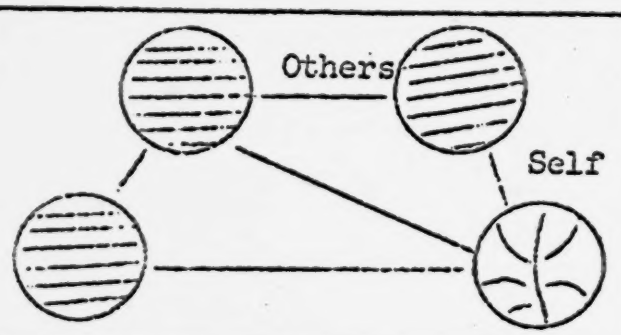
CHART 1

DEVELOPMENTAL STAGES OF INTERPERSONAL ORIENTATIONS UNDER OPTIMAL CONDITIONS

Stage	Interpersonal Orientation	"Conceptual work" associated with specific stage
Sub-I		Self-centered, unorganized phase before incorporation of cultural standards.
Stage I		Learning the "ground rules" or cultural standards which apply to everyone.
Stage II		Learning about oneself and how one is distinct from these generalized standards.
Stage III		Applying these self-anchored dimensions to an empathic understanding of other persons and differences between them.
Stage IV		Placing the dimensions applicable to self and other into a meaningful integrated relation.

References: Harvey, O.J., Hunt, D.E., and Schroder, H.M. Conceptual Systems and personality organization. N.Y. Wiley, 1961

Hunt, D.E. A Conceptual Systems change model and its application to education, Unpublished ms, 1964.

CHART 2

SUMMARY OF EXPECTED AND OBSERVED CLASSROOM

CHARACTERISTICS AND OPTIMAL ENVIRONMENTS

	Sub-I group	Stage I group	Stage II group
Expected Characteristics of stage group	Egocentric, very concrete, impulsive, low tolerance for frustration.	Concerned with rules dependent on authority, categorical thinking.	Independent, inquiring, self-assertive, more alternatives available.
Obsdrved characteristics of classroom group	"Noisy, poorly disciplined, inattentive" "Easily confused, less self-control than others"	"Orderly, quiet, attentive", "Questions asked to impress teacher". "Do not have faith in their convictions"	"Did not rely on teacher's direction" "Interested in finding out information" "Stand up for their convictions".
Expected optimal environment for group	Highly structured, consistedt environment providing many concrete, specific experiences.	Encouraging autonomy within normative standards.	Highly autonomous with opportunity for self-selected individual activities and projects.
What teachers found worked best with group	"More visual things, showing the actual thing by demonstration rather than having them show me" "Drilling, exercises get them busy right away".	"Since they are so competitive I put them in seats according to order of scores on tests". Use of debates.	"I let them know how I feel about something and they listen, evaluate, and discuss it". Debates ineffective